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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,516	12/28/2005	Masahiro Goto	CU-4639 RJS	8063

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LADAS & PARRY LLP
224 SOUTH MICHIGAN AVENUE
SUITE 1600
CHICAGO, IL 60604

EXAMINER	
NGUYEN, THONG Q	

ART UNIT	PAPER NUMBER
2872	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,516	GOTO, MASAHIRO	
	Examiner	Art Unit	
	Thong Nguyen	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-8 and 10-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 6-8 and 10-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Feb. 14, 2008 has been entered.

Response to Amendment

2. The present Office action is made in response to the amendment filed on Feb. 14, 2008. It is noted that in the amendment, applicant has made changes to the specification and the claims.

3. Regarding to the claims, applicant has amended claim 1, canceled claims 4-5, and simultaneously added a new set of claims, i.e., claims 18-31, into the application. A review of the device as recited in the newly-added claims has resulted that the device of the new claims has the similar scope as that recited in the amended claims, and thus all pending claims 1-3, 6-8 and 10-31 are examined in this Office action. Note that claim 9 was canceled in the amendment of 8/31/07.

Specification

4. The lengthy specification which was amended by the amendment of 2/14/08 has not been checked to the extent necessary to determine the presence of all possible

minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The objections to the specification as set forth in the previous office action are overcome by the amendments to the specification as provided in the amendment of 2/14/08.

Claim Objections

6. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 3 recites that the relationship between the refractive indexes of the material constituting a slope portion of the wedge-shaped portion and the material constituting the lens portions satisfies the condition thereof "$0.8N1 \leq N2 \leq 0.98N1$", see claim 3, lines 2-3; however, the range of the relationship as claimed is boarder than the range recited in its base claim 1, see claim 1, lines 7-11. Thus, claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-3, 6-8 and 10-31, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Masahiro (Japanese reference No. 2003-66206 (hereafter Masahiro '206) in view of Cohen (U.S. Patent No. 4,621,898) (all of record).

Masahiro discloses an optical device. The device as described in sections [0053]-[0054] and shown in fig. 1 comprises a fresnel lens (104), a first view angle control sheet (103), a second view angle control sheet (102) and a touch sensor (101) arranged in that order from a screen of an liquid crystal display (105). From the descriptions provided in sections [0006]-[0012], [0056] and [0100], each of the view angle control sheet (103, 104) comprises the following structures: a) a first transparent base element (1), a second transparent base element (3) and a lens sheet (2) sandwiched between the first and second elements (1,3); b) the lens sheet (2) comprises lens portions having trapezoidal shapes in cross-sections and arranged at predetermined spaces from each others, and wedge-shaped portions having isosceles triangle shapes in cross-sections which wedge-shaped portions are arranged between the lens portions; c) the wedge-shaped portion has a refractive index which is smaller than the refractive index of the lens portion; d) each of the wedge-shaped portions comprises a bottom surface (7) facing the element (1) and two slopes formed an angle in the range of 5 to 15 degrees with respect to a normal line of the a light beam outgoing plane, see sections [0037], [0056], and [0074]; e) each of the wedge-shaped portions contains light absorbing (5) mixed in a resin base substrate (6) of low refractive index; f) in section [0074], the refractive indexes of

the materials of the lens portion and the wedge-shaped portion is in the range of 0.23 to 0.996 which covers the range of 0.8 to 0.98 as recited in claims 3 and 20, and the angle .theta. is in the range of 5 to 15 degrees which is inside the range as claimed in claims 2 and 19, and thus it is expected that the structure of the lens portion and the wedge-shaped portions provided in the mentioned section [0074] satisfies the conditions as recited in the present claims 1-3 and 18-20. In particular, in section [0074], since Masahiro discloses that the ratio between the refractive indexes of the materials of the lens portion and the wedge-shaped portion is in the range of 0.23 to 0.996 and the refractive index of N1 is less than 5.76, then when the ratio between the refractive indexes N2/N1 is 0.995 and the refractive index N1 is selected as 5.5 then the refractive index N2 is about 0.996 x 5.5 = 0.991 which is less than the refractive index N1 = 0.995 and larger than N1- 0.01 = 0.995 - 0.01 = 0.985 and thus the relationship between the refractive indexes N1 and N2 satisfy the conditions as claimed in claim 1. It is also noted that when the ratio N2/N1 is selected as 0.995 and the angle .theta. is 6 degrees then the relationship defined by (R- Cos (6 degrees)) is about 0.001 which is inside the range as claimed in claim 18. See also In re Wertheim, supra 541 F. 2d 257, 191 USPQ 90 (CCPA 1976); In re Titanium Metals Corporation of America, supra 227 USPQ 773 (Fed. Cir. 1985); g) The wedge-shaped portions can have its two slopes following a curved contour or a straight line, see sections [0030], [0076] and figs. 7; h) the use of light absorbing particles mixed inside a resin substrate in the volume and the relationship between the dimension of the

particle and the width of the bottom surface of each wedge-shaped portion as described in sections [0014]-[0016] and [0095] satisfy the condition governing the relationship between the two as recited in present claims 11-12 and 25-26 and the crosswise stripe as recited in present claim 15; I) the use of antireflection coating, antistatic coating, ...is disclosed in sections [0044], [0053] and [0066]; and j) the arrangement of two control sheets in a mutually perpendicular arrangement is disclosed in section [0006] and fig. 1.

Regarding to the feature that the width of the bottom surface is not more than 1/1.5 of a size of a pixel as recited in present claims 17 and 31, such a feature is within the level of one skilled in the art to control the size/dimension of the bottom surface of the wedge-shaped portion with respect to the size of a pixel in a display device for the purpose of providing an optimum result in quality of the image display.

Regarding to the feature that one of the angle formed by a slope with a normal line is larger than the angle formed by the other slope with the normal line as recited in present claims 7 and 22, such a feature is not critical to the invention because applicant has admitted that the slopes of the wedge-shaped portion are oriented in a similar fashion. Such a use of a wedge-shaped portion in the form of an isosceles configuration, i.e., the angles formed by the slopes with the normal line are equal, is indeed claimed as can be seen in present claims 6 and 21. Further, it is within the level of one skilled in the art to select individual slope

angles based on the incident light to control the direction of light output from the wedge-shaped portion to a viewer.

The only feature missing from the light control sheet provided by Masahiro is that he does not explicitly disclose that the leading edge of the wedge-shaped portion faces to a viewer side with an outside light beam absorption effect and the bottom surface of the wedge-shaped portion faces the image side as claimed. In the system as provided by Masahiro '206, the leading edge of the wedge-shaped portion faces the image side and the bottom surface of the wedge-shaped portion faces the viewer side. See fig. 1, for example.

However, it was decided in the Courts that a rearrangement or a reversal of the components in an optical device involves only routine skill in the art. In re Japikse, 86 USPQ 70; In re Einstein, 8 USPQ 167. Further, an arrangement of a light control sheet having lens portion having trapezoidal shapes in cross-sections and arranged at predetermined spaces from each others, and wedge-shaped portions having isosceles triangle shapes in cross-sections which wedge-shaped portions are arranged between the lens portions wherein the leading edges of the wedge-shaped portions face the viewer side is known to one skilled in the art as can be seen in the optical device provided by Cohen. In particular, Cohen discloses a light control sheet (15) having lens portions portion having trapezoidal shapes in cross-sections and arranged at predetermined spaces from each others, and wedge-shaped portions (15) having isosceles triangle shapes in cross-sections which wedge-shaped portions are arranged between the lens

portions and grooves and contained light absorbing materials (18), see column 3, lines 4-23. Cohen teaches that the leading edges of the wedge-shaped portions can be arranged to face an image side or a viewer side. See column 4, lines 44-50 and fig. 3. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the view angle control sheet in the optical system provided by Masahiro by rearranging the sheet so that the leading edges of the wedge-shaped portions face the viewer side as suggested by Cohen for the purpose of meeting a particular application. It is also noted that the combined product in which the bottom surface of the wedge-shaped portion faces the image side and the leading edge of the wedge-shaped portion faces to a viewer side as provided by Masahiro et al in view of Cohen will inherently have an outside light beam absorption effect due to the same structure of the optical element and the same arrangement of the optical element with respect to the image side and the observed side.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 18-19, 21, 23-28 and 30, are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12-13 and 15-37 of copending Application No. 10/587,551. Although the conflicting claims are not identical, they are not patentably distinct from each other because all features recited in claims 18-19, 21, 23-28 and 30 of the present application are readable from the features disclosed in claims 12-13 and 15-37 of the copending application. In particular, the feature recited in present claim 18 is readable in copending claims 12 and 17; the feature recited in present claim 19 is readable in copending claim 13; the feature

recited in present claim 21 is readable in copending claim 15; the feature of present claim 23 is readable in copending claim 16; the feature recited in present claim 24 is readable in copending claim 22; the feature recited in present claim 25 is readable in copending claim 27; the feature recited in present claim 26 is readable in copending claims 32 and 33; the feature of present claim 27 is readable in copending claim 36; the feature recited in present claim 28 is readable in copending claim 37; and the feature of present claim 30 is readable in copending claims 34-35.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

11. Applicant's arguments with respect to claims 1-8 and 10-17, now applied to claims 1-3, 6-8, and 10-31 as provided in the amendment of 2/14/08, page 8 have been considered but are not persuasive for the following reasons.

> Applicant has argued that the combination of art provided by Masahiro and Cohen does not disclose the relationship governing the refractive indexes as recited in the claim(s), the Examiner respectfully disagrees and respectfully invited the applicant to review the art of Masahiro, in particular, section [0074] which discloses numerical data of the refractive indexes of the materials of the lens portion and the wedge-shaped portion. In particular, in section [0074], since Masahiro discloses that the ratio between the refractive indexes of the materials of the lens portion and the wedge-shaped portion is in the range of 0.23 to 0.996 and the refractive index of N1 is less than 5.76, then when the ratio between the

refractive indexes N2/N1 is 0.995 and the refractive index N1 is selected as 5.5 then the refractive index N2 is about 0.996 x 5.5 = 0.991 which is less than the refractive index N1 = 0.995 and larger than N1- 0.01 = 0.995- 0.01 = 0.985 and thus the relationship between the refractive indexes N1 and N2 satisfy the conditions as claimed in claim 1. It is also noted that when the ratio N2/N1 is selected as 0.995 and the angle .theta. is 6 degrees then the relationship defined by (R- Cos (6 degrees)) is about 0.001 which is inside the range as claimed in claim 18. See also In re Wertheim, supra 541 F. 2d 257, 191 USPQ 90 (CCPA 1976); In re Titanium Metals Corporation of America, supra 227 USPQ 773 (Fed. Cir. 1985). Thus, applicant's arguments have been fully considered but they are not persuasive.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thong Nguyen/
Primary Examiner, Art Unit 2872